

REMARKS

Applicant is in receipt of the Office Action mailed March 25, 2005. Claims 3, 4, and 38 have been cancelled. Claims 1, 5, 8, 9, 37, 39-41, and 64 have been amended. Thus, claims 1-2, 5-37, and 39-71 are pending in the case. Reconsideration of the present case is earnestly requested in light of the following remarks.

Amendments

Applicant has amended the Specification to include patent numbers for cited applications that have issued.

Applicant has amended the independent claims 1, 37, 64, and 68 to include the limitation that the host computer is coupled to the second system via a split bridge, and has cancelled claims 3, 4, and 38, and updated claims 5, 8, 9, and 39-41, accordingly.

Section 103 Rejections

Claims 1-3 were rejected under 35 U.S.C. 103(a) as being unpatentable over Papa et al (U.S. Patent 6,418,492, "Papa"). Applicant respectfully disagrees.

Applicant respectfully reminds the Examiner that to establish a prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. In re Bond, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

Moreover, as held by the U.S. Court of Appeals for the Federal Circuit in Ecolochem Inc. v. Southern California Edison Co., an obviousness claim that lacks evidence of a suggestion or motivation for one of skill in the art to combine prior art references to produce the claimed invention is defective as hindsight analysis.

In addition, the showing of a suggestion, teaching, or motivation to combine prior teachings "must be clear and particular Broad conclusory statements regarding the

teaching of multiple references, standing alone, are not 'evidence'." *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). The art must fairly teach or suggest to one to make the specific combination as claimed. That one achieves an improved result by making such a combination is no more than hindsight without an initial suggestion to make the combination.

Applicant respectfully submits that Papa fails to teach all the features and limitations of claim 1, and that the Examiner has not made a proper *prima facie* obviousness case based on Papa.

Amended claim 1 recites:

1. (Currently Amended) A method for reconfiguring a second system in a system comprising a host computer system coupled to the second system through a split bridge, wherein the split bridge comprises a first interface comprised in the host computer system, a second interface comprised in the second system, and a communication medium coupling the first interface and the second interface, wherein the first interface, the second interface, and the communication medium collectively comprise the split bridge, and wherein the host computer system includes host driver software, the method comprising:

- the host computer system saving configuration information for the second system;
- receiving user input requesting a power down condition for the second system;
- the second system generating an indication of the power down condition to the host computer system in response to said user input;
- the host computer receiving the indication of the power down condition;
- the host driver software entering a quiescent state after receiving the indication;
- powering down the second system, wherein the second system is operable to be reconfigured by a user after said powering down;
- powering up the second system after said powering down and after the second system has been reconfigured by a user;
- the host computer system detecting said powering up of the second system; and

the host computer system restoring second system configuration using said configuration information.

The Office Action asserts that Papa discloses a split bridge interposed between the host computer system and the second system, citing bridge 122a of Figure 3. Applicant respectfully submits that the cited bridge is not a split bridge. As is well known in the art of bridged systems, a split bridge is physically partitioned into two portions and joined by a transmission medium, thus facilitating spatial separation between the host computer system and the second system. For example, page 3, lines 2-15 of the present application reads:

A split bridge may allow the extension of a computer bus, such as a PCI bus, to a remote location with little or no performance degradation or software requirements. For example, standard PCI-PCI bridge chip functionality may be split between two remotely located components which may be located on the computer and the remote chassis, respectively. For example, in a PCI split bridge system, the host computer includes a primary PCI bus and a first interface comprising a first portion of the bridge, the remote system includes a secondary PCI bus and a second interface comprising a second portion of the bridge, and the two systems are coupled via a transmission medium, e.g., a serial or parallel transmission cable. The first interface, the transmission medium, and the second interface may collectively comprise the bridge. In this manner, PCI devices attached to both of the PCI systems may be coupled seamlessly, or transparently, i.e., the PCI expansion devices coupled to the remote PCI bus may appear to the computer system as if they were coupled directly to the local PCI bus in the host computer system.

Applicant further notes that a standard (non-split) bridge comprises a single device, i.e., does *not* include two distinct separated portions coupled via a transmission medium. For further information regarding split bridges, please see U.S. Patent No. 6,425,033 titled System and Method for Connecting Peripheral Buses Through a Serial Bus (Serial No. 09/092,342) and U.S. Patent No. 6,418,504 titled System and Method for Connecting Peripheral Buses Through a Serial Bus (Serial No. 09/876,003) both assigned

to National Instruments Corporation. U.S. Patent No. 6,070,214 assigned to Mobility Electronics also describes a “split bridge” implementation.

Thus, Applicant respectfully submits that the cited bridge of Papa is not a split bridge. Applicant further notes that Papa nowhere mentions or even hints at a split bridge.

Thus, for at least the reasons presented above, Applicant submits that Papa fails to teach all the features and limitations of claim 1, and so claim 1 and those claims dependent therefrom are patentably distinct and non-obvious over Papa, and are thus allowable.

The Office Action rejected claims 4-63 under 35 U.S.C. 103(a) as being unpatentable over Papa, in view of Sturm et al (U.S. Patent 6,687,779, “Sturm”), and also rejected claims 64-71 under 35 U.S.C. 103(a) as being unpatentable over Sturm in view of Papa. Applicant respectfully disagrees.

Applicant notes that claims 37, 64, and 67 each include “split bridge” limitations, and so the above arguments apply with equal force to these claims with respect to Papa.

Additionally, Applicant submits that neither Papa nor Sturm provides a motivation to combine. For example, Papa nowhere indicates the desirability of a spatially distinct or separated host computer and second system coupled via a split bridge and transmission medium. In fact, Papa specifically describes the system implementing the disclosed hot swap/add technique as being a single computer (a server) with connected devices, such as a NIC (network interface card) or SCSI (Small Computer Serial Interface). For example, col. 3, lines 30-50 read:

Many PC's however, function as servers which are a vital component of a network providing for example: database, storage, print or other resources for the network. When a PC functions as a server, the requirement of PnP, that the computer be turned off to add a new component or repair and replace an existing component is not acceptable. In situations such as banking, airline reservations, or the stock exchange it costs a lot of time and money to bring down the

network. In these networked environment a computers ability to overcome device failure is critical.

What is needed is a way to have a machine that continues to run even though a particular PCI device, such as a NIC or SCSI goes bad. What is needed is a machine that will allow the defective or outdated peripheral device to be replaced and placed back in service while the machine continues to run. What is needed is a machine in which new devices can be added and brought into service while the machine is running. (*emphasis added*)

It is well known that that NICs and SCSIs are computer cards inserted into adaptor or expansion slots of a computer. Moreover, as Papa clearly indicates in the Summary (col. 3, line 53-col. 4, line 4):

Apparatus and method is disclosed for providing hot-add and hot swap capability to a computer system with a processor, and a memory, connected to a system bus. The apparatus includes a first bus, an adapter card slot, a switchable interface unit and hot-swap hot-add program code means. The first bus is connected to the system bus. The adapter card slot has a first port and a second port. The switchable interface unit includes a primary port and a secondary port. The primary port is connected to the first bus and the secondary port is connected to the first port of the adapter card slot. The switchable interface unit is responsive to a hot-swap hot-add power-down request to disconnect the second port from the first bus. The switchable interface unit is also responsive to a power-up request to reconnect the second port to the first bus. The hot-swap hot-add program code means in the memory accepts a request to connect a peripheral device adapter card into the second port of said adapter card slot, and responsive to the request communicates a power-down request to the switchable interface unit. (*emphasis added*)

In other words, Papa is clearly directed to a computer system with an onboard adaptor card slot or slots, and hot swap/add functionality for peripheral devices plugged into the adaptor or expansion slots of the computer. Papa nowhere suggests the utility or desirability of locating the peripheral devices remotely from the computer system.

Nor does Sturm indicate the desirability of incorporating Papa's technique for providing hot-add and hot swap capability to a computer system into a split bridge

system. Sturm is directed to *a method and apparatus for transmitting control information across a serialized bus interface* (Title), and is particularly directed to sending control codes for reset and mode changes over a serial line in a PCI-PCI split bridge system. Nowhere does Sturm mention or even hint at hot swapping or hot adding (or hot configuring) a second system coupled to a host computer over a split bridge, nor the desirability of such a process.

Thus, Applicant respectfully submits that the Examiner's attempt to combine Papa and Sturm is improper. Furthermore, Applicant submits that even were Papa and Sturm properly combinable, which Applicant argues they are not, the resultant combination would still not produce Applicant's invention as represented in amended claim 1 (and also claims 37, 64, and 67). For example, the alleged combination would necessarily include Papa's adaptor card(s) in the adaptor slot(s) of the computer itself, and would also require Sturm's data control circuitry coupled to control output nodes utilizing a coding scheme (e.g., an 8B/10B scheme) to generate one of a set of control codes (e.g., Idle, Extend, Normal Data and Error) to be provided to the control output nodes. The alleged combination would also include reset control circuitry that generates a specified sequence of control codes (e.g., a sequence of Idle's and Extend's) on the control outputs (Abstract). Applicant submits that these inherent components of the attempted combination are not germane to Applicant's invention as claimed. Furthermore, Papa's adaptor cards in slots of the computer system actually teach *away* from Applicant's invention, since it would not make sense to use a split bridge in such a system.

As the Examiner is certainly aware, per *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985), it is insufficient to select from the prior art the separate components of the inventor's combination, using the blueprint supplied by the inventor. Moreover, determination of obviousness ***can not be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention***. There must be a teaching or suggestion within the prior art, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources of information, to select particular elements, and to combine them in the way they were combined by the inventor.

Applicant respectfully submits that the Examiner has simply selected particular components of Papa and Sturm and omitting others (e.g., Sturm's control codes for reset and mode change) in an attempt to construct Applicant's invention as claimed, and has done so without any motivation to combine provided by the referenced art. As stated in the MPEP §2143.01, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Thus, Applicant respectfully submits that the attempted combination of Papa and Sturm is improper.

Thus, for at least the reasons provided above, Applicant respectfully submits that neither Papa nor Sturm, taken singly or in combination, teaches all the limitations of independent claims 1, 37, 64, and 67, and so claims 1, 37, 64, and 67, and those claims respectively dependent therefrom, are patentably distinct and non-obvious over the cited art, and are thus allowable.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

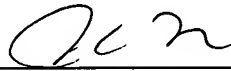
Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-51700/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,



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